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Inaugural Dissertation

upon

Bilious Fever

by  
Silas E. Potts

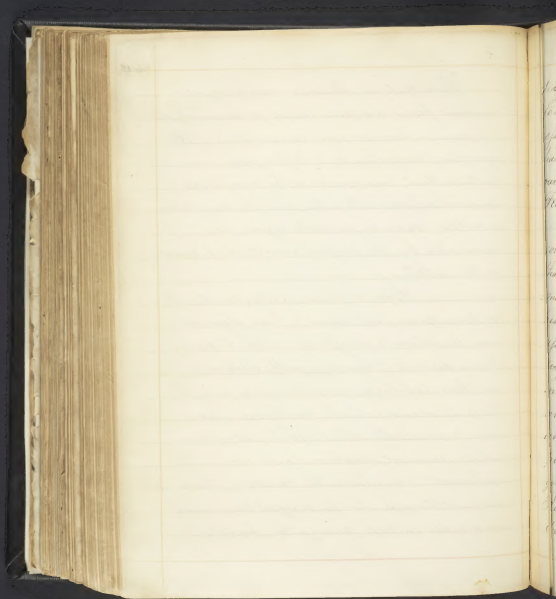
of Philadelphia

satisfactory - a fine masterpiece

Jan 2nd 1897  
A. F. H.

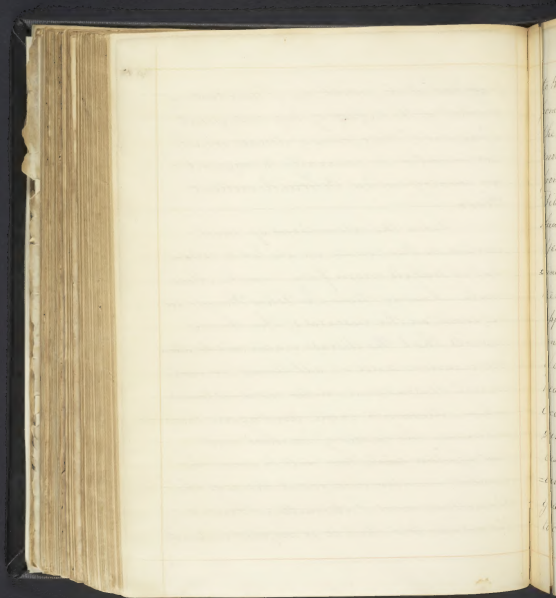
"Remittent, in Medicine, implying also the word fever, is a fever which is characterized by a regular decrease and exacerbation of its symptoms every day, and differs from an Intermittent, inasmuch as the symptoms never disappear altogether, and the exacerbation is neither begun by complete rigors, nor terminated by the profuse sweat, which occurs in the latter."

From unknown causes, our climate for some years past seems to have acquired new habits to be afflicted with Disease. Many districts of Country justly celebrated for their salubrity, have become a prey to those Diseases, which heretofore have been principally attributed to situations whose natural disadvantages were sufficient to explain the causes of their unhealthiness. As this subject has excited not a little interest among the Medical



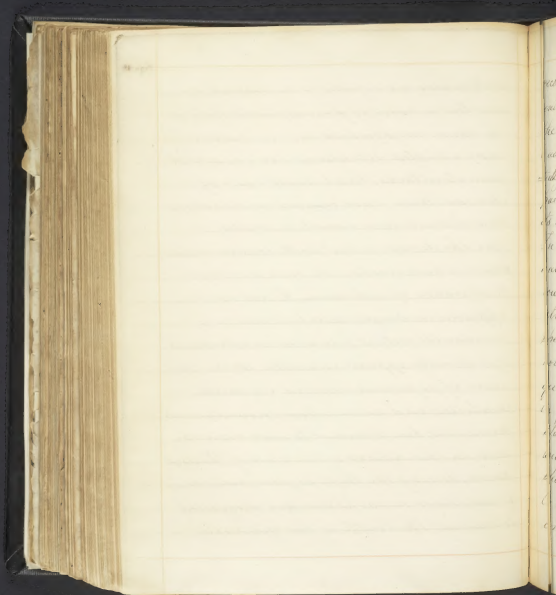
profession at the present day, I have ventured to select as the subject of my inaugural essay, one of those forms of disease which has prevailed so generally throughout our country called Bilious, Remittent Fever.

From the observations of most writers on this disease we are led to believe that it has its origin from miasmata. Among these Dr John King in his work on the diseases of the Army, asserts, that the disease under consideration every where and at all times prevails in hot seasons and under circumstances where miasmata exist. And again, that wherever the causes of moisture and putrefaction exist, there will be seen the greatest number and worst kinds of the Remitting and Intermitting Fevers. We are also told that it is confined exclusively



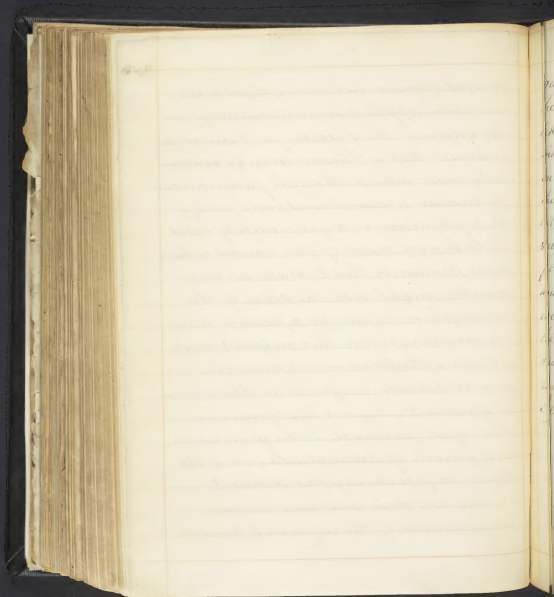
to those who are exposed to noxious exhalations  
 from low or swampy grounds, whilst those in  
 the same neighbourhood but in rather  
 more elevated situations are exempted  
 from its attacks. That most cases of  
 Bilious Fever have occurred in situations  
 thus characterized cannot be doubted.

Yet the disease is met with under circum-  
 stances which would not seem to indicate  
 the operation of such causes. It has not only  
 appeared in single cases but even to a  
 considerable extent prevailed in situations  
 of a directly opposite character as in the  
 heart of populous cities, in elevated  
 localities, and even upon mountainous  
 summits; Such I conceive to have been the  
 case in the interior of the state of Pennsyl-  
 -vania, during the three or four preceding  
 years. These remarks are not suggested  
 to combat the truth of the generally





received opinion but as exceptions to its universal application, in accounting for the origin of the Disease, for I am ready to admit that a Theory may be substantially good which though failing under particular circumstances, will justify its application in a generality of cases. In taking a view of the causes which have produced this Disease in our country, ought not the state of the atmosphere to occupy a portion of our speculations upon this subject? May not an alteration in its sensible qualities, have originated the disease in question? May not that peculiar state of it favourable to the generation and growth of Animatecula, have its share in producing the disease? Or may not some new and unseen combinations of the different sensible



quantities of the atmosphere, have rendered  
 the system liable to the attacks of the  
 disease? The writer would not, however,  
 with his limited experience, suggest  
 an additional cause, or the disease in  
 the extraordinary which he has mentioned,  
 but would refer the investigation of this  
 subject, to those whose time and abilities  
 are more for the research; Permitted  
 however, that the duty of the Physician  
 does not consist so much in detecting  
 the cause of disease, as in endeavouring  
 successfully to combat the evil, I would  
 consider in the next place, the  
 Symptoms of Bilious Fever.

### Symptoms

The Symptomatic Signs of Bilious  
 Fever, are allied in character to the



Symptoms which usher in those of the  
 febrile affections. The patient is seized  
 with tingling, and shillings, attended  
 sometimes with shooting pains through  
 out his system; He complains of head-  
 ache, together with loss of appetite,  
 and nausea. The pulse in this stage  
 of the disease, is most commonly  
 small, and contracted, accompanied  
 in a shivering, or constricted state of  
 the capillary system. In the course  
 of a short time, the system reacts,  
 and symptoms of a more formidable  
 character supervene. The skin, before  
 of an unequal temperature, becomes  
 hot, and dry, the pulse is now full,  
 and often very tense, the headache  
 increases, attended in a considerable  
 degree of the arterial action.  
 The commotion in the system



nas throats, and skin, now becomes dry,  
and coated with a brown, and dark  
coloured peen. The stomach, is more uneasy,  
and not so frequently voids its charge  
of bile, which appears to give  
an uneasy, sick, or the sufferings of  
our patient. The nervous energies are  
more impaired; the patient is restless,  
often, from side to side, in his bed—  
is often agitated, sighing frequently,  
and in more malignant forms  
of the disease, when there is much  
violent vomiting, it is often heard  
a sob, and even seen to shed tears.  
The bowels are open sooner, and on  
this being evacuated, the discharges  
are of a black or green colour, and are  
especially of a stercoraceous colour. The urine  
is hot, and bright coloured, sometimes  
exhibiting a burning sensation while





saying, through the Urthine. The skin  
 is often of a yellow colour, as is also the  
 adnalo. As the disease progresses the  
 humours increase in violence, the pain  
 in the head is augmented, producing  
 delirium, and sometimes coma; The  
 stomach becomes very inactive, so  
 much so indeed, as to reject our remedies  
 and even nourishment: A sensation  
 of weight and oppression is often felt  
 in the epigastrium, attended with  
 pain on the application of pressure.  
 The pulse becomes rapid, quick, and  
 fluttering, and, finally ceases altogether.  
 At length, and occasionally a vomiting  
 of a dark looking matter takes  
 place, which Death soon after, puts  
 an end to the sufferings of the patient.  
 There is no least common than all  
 of the symptoms as we need observe



occurs in every summer, or in some there is no sweating of the skin, in others a moisture on the skin is observable, even when the pulse indicates violent excitement in the Arterial System.

45 an attempt to advance any theories  
views, would betray arrogance in one  
who has just displayed a sensitive thin-  
sked of the most able criticism, the  
writer has contented himself with  
giving a simple and undadorned  
history, of the symptoms of Bilious  
Fever, as they have come under  
his own observation, at the same  
time assisted, by the lucid explana-  
tions of the Professor of the Practice  
of Physick.



## Treatment of Bilious Remittent Fever.

In the symptoms of this disease vary  
very materially under certain circum-  
stances, and are modified by season,  
climate, and other causes; so no uniform  
mode of practice can be relied on.  
Remedies which at one stage of the  
disease would be highly beneficial, at  
another stage, might be attended with  
serious consequences. It will be necessary  
in many cases, to exhibit an Emetic  
in the first instance, but this, may be  
contraindicated by local determination,  
irritability of Stomach, or some other  
cause. We are therefore to adapt our  
remedies to the peculiar and existing  
state of the system. The necessity of



alluding to this important remark, we  
 dare cannot be too strongly insisted; as  
 a neglect of it will not only endanger  
 the life of the patient, but render the  
 practitioner obnoxious to just and  
 merited censure. With this proviso  
 on the subject, I will attempt  
 to consider that form of the disease,  
 which in its commencement is marked  
 by languor, and sickness of stomach.  
 The presence of this last symptom,  
 would naturally lead us to encounter  
 it with an Emetic. Called upon to  
 prescribe at this time, & exhausted  
 an **Emetic**, will be found of great ad-  
 vantage. It causes the system to react,  
 relieves gastric distress & removes the cold  
 and congested state of the skin, and  
 often procures a crisis, and even  
 a cure. The prompt and active





operation of this remedy, not unfrequently  
 Anagis is indicated in its commencement  
 = ment. If, however the reaction of the  
 system exceeds the natural grade, and  
 is attended by tension, and activity in  
 the pulse - increase of temperature of  
 the surface - and pain in the head;  
**Venection**, must be resorted to.

The quantity of blood to be taken from  
 the patient, must be regulated by the  
 effect produced on his pulse; Remembering  
 at the same time, that the disease is  
 modified by season, climate, idiosyncrasy,  
 and many other causes. Occasionally  
 such relief is afforded, when this  
 remedy produces sickness, or a disposition  
 to syncope, the pulse becoming softer,  
 and less frequent. It moderates, and  
 not unfrequently entirely relieves,  
 the pain in the head abates restlessness,



and diminishes considerably the heat  
of the surface. Owing to these circum-  
stances the patient often enjoys a few  
hours of tranquil slumber.

If however there should appear  
much costive distress, such as nausea,  
with a constant desire to evacuate the  
contents of the stomach, an Emetic  
may again be given with advantage.

Administered at this time it rids  
away large accumulations of bile,  
and removes the sense of weight, and  
oppression, felt in the Epigastric  
region. Nor should we be content  
with giving a single Emetic, if we  
do not find it relieve these, causes;  
in such cases a repetition of the  
emetic is clearly indicated; the  
bile again and again, when the  
pulse shows high Arterial action,



to restore it to its natural state, and why upon the same principle should we not repeat emetics to restore the stomach to its healthy state?

Of the different Emetics now in use, the preparations of Antimony are most useful.

The Tartarized Antimony, or Emetic Tartar, in the dose of  $\frac{1}{4}$  gr, dissolved in half an ounce of water, repeated every twenty or thirty minutes, forms a very good and prompt Emetic. Should the patient prefer the stannous salt, it may be given, every twenty minutes until emesis is excited.

When Emetics cannot be given, either on account of the prejudices of the patient, or from some other cause, as rupture, or a predisposition to apoplexy, we may then resort to purging. This class of remedies



is called *jaundice*, when the bowels are loaded with bile, and their secretions present the most unnatural qualities; when the faces are of a dark colour, and offensive odour, It is of the highest importance to continue these evacuations, until the discharges from the bowels assume a more healthy appearance, By attention to this, it is more likely that the very seeds of the disease will be eradicated from the System.

The most proper article in the Class of Purgatives <sup>to effect</sup> these discharges, is Calomel, either alone, or combined, with Jalap, Rhubarb, or Gamboge.

The dose of Calomel when given alone, should be 10 grs, and diminished according to the Age, or habit of the patient, To remove the dark, larry, and fatid matter, which is found adhering closely

≡ Blisters applied to the inside of  
the legs or arms might also be  
enumerated among the means  
of reducing cerebral excitement.



to the inner surface of the intestines, we should give the Calomel in small, and repeated doses.

The Neutral Salts will be found important adjuncts.

If the Material System should not remain subdued, as an auxiliary a leucosation, the Nitrate of Potash, or Nitre, may be used, either alone, or combined with minute portions of Calomel, and Tartarized Antimony.

After having reduced the System by our previous evacuations, we are next to resort to those remedies which promote a discharge from the skin, these articles should not be prescribed, until arterial action has been subdued by proper means, the mercurial diaphoretic then may be used with very great advantage, Diaphoresis, continued for a length of time,



not unfrequently cures the disease.

Various articles have been used for  
 purifying this disease, by Sweating.  
 The celebrated James Powder, is a  
 preparation entitled to much confidence,  
 as is also the *Acetate of Ammonia*, or  
*Spiritus Siliaceus*. All of the Antimonial  
 preparations in small doses, will prove  
 serviceable; the *Tartarized Antimony*,  
 however is most commonly used, in doses  
 of  $\frac{1}{16}$  to  $\frac{1}{8}$  of a grain, it promotes a discharge  
 from the skin, almost invariably.

Where, however, owing to irritability of  
 the Stomach, this medicine cannot be  
 retained, we may resort to others more  
 congenial; of these the *Neutral Mixture*, is  
 one of the best. It is prepared as follows,

R $\bar{s}$  Succin. Limon. recut. - vel Acet. Acid.  $\mathfrak{z}\text{ij}$

Sol. Tart. q.s. ad saturand.

Aq. Font.  $\mathfrak{z}\text{ij}$ . Sacch. Alb.  $\mathfrak{z}\text{i}$ .

Dose, a table spoonful every hour or two.



Advantage may be gained, by adding a few drops of Laudanum, or Antimonial wine, to the above mixture.

The *Styrous* or *Antimonial Powders*, are also much used in practice, and are also entitled to a share of confidence; They may be prepared as follows.

R<sup>y</sup> Sal. Mir. ʒi

Calom. Prep. gr<sup>xii</sup>

Emet. Tart. gr<sup>i</sup>.

Mix; Divide into Eight powders.

Of these powders, one may be taken every hour or two.

It is not always proper to unite the Calomel with the other ingredients, as it has more than once excited a Hyalism. The Emetic Tartar, is to be graduated according to the circumstances of the case.

Besides these internal remedies,



there are others which operate differently,  
producing however the same effect.

The Vapour Bath, is one of these,  
and will be found an excellent method  
of producing perspiration.

It may be prepared in the following  
simple way;— place warm bricks in  
the bed of the patient, and on them, pour  
water or spirits, the vapour arising from  
the Bricks, by relaxing the Surface, dispo-  
ses to sweating.

Cold Applications, have also been  
resorted to, to produce a like effect,  
either by Ablution, Aspersions, or  
Affusions; of these different Modes  
of applying cold, that by Ablution,  
seems to be the least hazardous, and  
most agreeable;— a sponge saturated  
with water, and applied to the  
Surface, is generally found to relieve





the violent heat of the Surface, and  
produce a dissolution & sweating.

The Warm Bath, is also much  
used to promote diaphoresis, it may  
be either simple, or medicinal.

This is a remedy peculiarly applicable  
in children, in whom we wish to  
excite perspiration.

It is unnecessary to mention any more  
of our medicines than those already  
enumerated, and I have contented  
myself with giving those most usually  
employed.

As a last resort, & Mercury,  
administered in such quantities  
as to slightly touch the mouth, has  
been found useful.

The quantity necessary to produce  
this effect, is generally one grain of  
calomel, combined with a quarter of a



grain of Opium. On account of the Slowness  
of the operation of Mercury, when given  
in this way, Mercurial Frictions, upon the  
inside of the Thighs, have been found to  
answer exceedingly well; When the gums  
become affected, the use of this remedy  
should be discontinued.

In the progress of the disease, many  
local symptoms present themselves  
demanding strict attention; When  
the Brain is affected, we find, delirium,  
pains, and coma, together with other  
symptoms, indicating the necessity of  
topical remedies; Topical Bloodletting,  
either by means of Cups, or Leeches, will  
generally relieve these dangerous  
symptoms. If however, this should not  
be thus removed, a Blister to the back  
of the neck, or over the whole of the  
Cranium, must be had recourse to;



in the latter case, suppuration of the scalp should proceed to the removal of the blister.

Where there exists an insupportable Irritability of Stomach, we have a choice of remedies; those most commonly used, are Lime water, or Lime Water and Milk, Seltzer water, the Effervescent Draught, Lemonade, and other palatable acidulated draughts. Minute doses of Calomel, Turpentine, Laudanum, An old opium pill, and many others equally good might be named.

The external applications to relieve the same distressing feelings are Mustard, applied over the Stomach, Laudanum injections, or a blister over the Epigastric region, these remedies when judiciously applied, generally have the effect of restoring the Stomach



to its natural state.

We sometimes observe the disease assuming a chronic form constituting what is termed *Tetrecula* or *Inward Fever*; a species of *Fetile* affection demanding particular attention. It is generally attended by a small corded hard and quick pulse, heat of surface, pallor complexion, furred tongue, headache, fatid breath, turned abdomen pain in one or both sides, anasarca extremities, scanty and high coloured urine, constipated bowels and clay or ash coloured stools.

As it is owing to congestion of some of the viscera the proper remedies are gentle Purges aided by the Vapour Bath and Mercury urged to a slight salivation.





If debility occurs the Nitric or Nitro  
Muriatic Acid may be used.

Where there is Arterial excitement  
Bleeding and Blistering may  
be had recourse to.

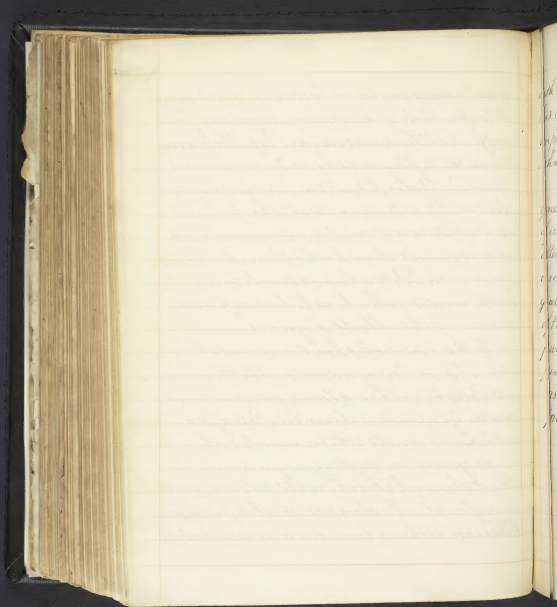
The administration of Tonics  
in the commencement of this affec-  
-tion scarcely ever acts to aggravate  
its symptoms. After proper evacuations  
Bark and the preparations of Steel  
may be used with safety and advan-  
-tage.

Having detailed the Treatment  
proper during the Dyrexia, we should next  
turn our attention to the patient whilst  
convalescing. It will have a happy effect  
if the chamber in which he has been  
confined should be changed, or at  
least that all the apparatus of sickness  
be removed. In prescribing his diet



great care should be taken in graduating it to the state of his system. beginning first with the Farinacea, as Sage, Tapioca, Rice, &c, afterwards he may be allowed Chicken Water, Chicken, Oysters, Vegetables, &c. It is proper that the patient eat often and in small quantities. As regards drinks, he may be indulged with Porter largely diluted with water, which is to be preferred to any of the Malt Liguors.

If the patient should recover but slowly we may administer Tonics, as Bark, either alone or combined with Gentian, Columba, Quassia, or Chamomile: these articles should be given in watery infusions. The Elixer Citriol will also be found beneficial. To obviate watchfulness, Opium either alone or in combination



with Camphor, may be given, and where this affection evidently proceeds from an empty stomach suitable and light nourishment should be ordered.

This may be considered as the general treatment suited to the case of convalescents, which, when properly attended to will assist a return to health; a result which must ever be eminently gratifying to the benignant feelings of the Practitioner who has anxiously pursued the disease in all its progress; and a result which ascertains the usefulness and preeminence of the Profession —

Fever